

STATEMENT OF BASIS

as required by LAC 33:IX.3109 for a draft permit for which a fact sheet under LAC 33:IX.3111 is not prepared, for draft Louisiana Pollutant Discharge Elimination System Permit No. LA0122645 AI 51671; PER20060001 to discharge to waters of the State of Louisiana as per LAC 33:IX.2311.

The permitting authority for the Louisiana Pollutant Discharge Elimination System (LPDES) is:

Louisiana Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

I. **THE APPLICANT IS:** Southeastern Louisiana Water & Sewer Company, LLC (SELA)
Timber Branch II Sewage Treatment Plant
350 North Causeway Boulevard
Mandeville, Louisiana 70448

II. **PREPARED BY:** Todd Franklin

DATE PREPARED: July 16, 2007

III. **PERMIT ACTION:** issue LPDES permit LA0122645, AI 51671; PER20060001

LPDES application received: November 27, 2006
Revised LPDES application received: June 11, 2007

The Timber Branch II STP was previously permitted under the Class IV Sanitary General Discharge Permit under permit # LAG570184. At the request from the permittee, authorization under this permit was terminated on December 7, 2004, due to the project never being constructed.

A draft permit for this facility was solicited for public comment on March 16, 2007. A public hearing was held for this draft permit on June 14, 2007. However, a revised application was submitted for an increase in flow to the facility, requiring a new draft permit to be issued and solicited for public comment.

EPA has not retained enforcement authority.

IV. **FACILITY INFORMATION:**

A. The application is for the discharge of treated sanitary wastewater from a privately owned treatment facility serving a number of residential subdivisions, retirement communities, churches, and light commercial businesses. A detailed list is below:

Subdivisions

Timber Branch
Beau Arbre
Weston Glen
Del Sol
Hidden Creek
Beau L'age
Terra Bella

Commercial

Infusion Partners
Dameware Development, LLC
LoBo, LLC
Weeks Marine
Gastroenterology Group
Patty Accornero
Women's Health & Fitness
Baptist Church
Walgreen's Pharmacy

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- B. The permit application does not indicate the receipt of industrial wastewater.
- C. The facility is located on LA Highway 1085 at Beau L'age Drive south of Covington and north of Mandeville, St. Tammany Parish.
- D. The treatment facility consists of an extended aeration sewage treatment plant with an activated sludge return process. Disinfection is by liquid hypochlorite solution.

E. Outfall 001

Discharge Location: Latitude 30° 27' 31" North
Longitude 90° 7' 58" West

Description: treated sanitary wastewater

Average Expected Flow: **Phase I:** 750 residences (including commercial facilities) @ 400 GPD each = 0.3 MGD
Phase II: 1700 residences + commercial facilities = 0.7 MGD

Calculations for gallons per day were based upon figures obtained from Chapter 15 of the State of Louisiana Sanitary Code, Department of Health and Hospitals, Office of Public Health.

Type of Flow Measurement which the facility is currently using:

Continuous Recorder

V.

RECEIVING WATERS:

The discharge is into Timber Branch; thence into the Tchefuncte River; thence into Lake Pontchartrain in Subsegment 040801 of the Lake Pontchartrain Basin. This segment is listed on the 303(d) list of impaired waterbodies.

The designated uses and degree of support for Segment 040801 of the Lake Pontchartrain Basin are as indicated in the table below^{1/}:

Overall Degree of Support for Segment	Degree of Support of Each Use						
	Primary Contact Recreation	Secondary Contact Recreation	Propagation of Fish & Wildlife	Outstanding Natural Resource Water	Drinking Water Supply	Shell fish Propagation	Agriculture
Partial	Not Supported	Full	Not Supported	Full	N/A	N/A	N/A

^{1/}The designated uses and degree of support for Subsegment 040801 of the Lake Pontchartrain Basin are as indicated in LAC 33:IX.1123.C.3, Table (3) and the 2004 Water Quality Management Plan, Water Quality Inventory Integrated Report, Appendix A, respectively.

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VI. ENDANGERED SPECIES:

The receiving waterbody, Subsegment 040801 of the Lake Pontchartrain Basin, has been identified by the U.S. Fish and Wildlife Service (FWLS) as habitat for the Gulf Sturgeon, which is listed federally as a threatened species. However, this type of discharge is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U. S. Fish and Wildlife Service (FWS). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. It was determined that the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

VII. HISTORIC SITES:

Although this facility is considered a new discharger, the discharge is from an existing facility location, which does not include an expansion beyond the existing perimeter. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the 'Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits' no consultation with the Louisiana State Historic Preservation Officer is required.

VIII. PUBLIC NOTICE:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit modification and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List

For additional information, contact:

Mr. Todd Franklin
Permits Division
Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

IX. PROPOSED PERMIT LIMITS:

Subsegment 040801, Tchefuncte River and tributaries – headwaters to confluence with Bogue Falaya River, is listed on LDEQ's Final 2004 303(d) List as impaired for pathogen indicators and mercury. To date no TMDLs have been completed for this waterbody. A reopener clause will be established in the permit to allow for the requirement of more stringent effluent limitations and requirements as imposed by a TMDL. Until completion of TMDLs for the Lake Pontchartrain Basin, those suspected causes for impairment which are not directly attributed to the sanitary wastewater point source category have been eliminated in the formulation of effluent limitations and other requirements of this

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permit. Additionally, suspected causes of impairment which could be attributed to pollutants which were not determined to be discharged at a level which would cause, have the reasonable potential to cause or contribute to an excursion above any present state water quality standard were also eliminated.

Pathogen Indicators

To protect against the development of pathogenic organisms in the receiving waterbodies, fecal coliform limits have been established in the permit. Also, to ensure that proper disinfection is performed at all times, flow proportional disinfection will be required in the permit.

Mercury

Traditional approaches to pollution control emphasize treating for pollutants through end-of-pipe effluent limitations. Mercury is introduced into domestic wastewater treatment facilities from users of the treatment system (ex: dental offices, labs, hospitals, doctor's offices, schools, inflow, infiltration and other users). Since the removal of mercury from sanitary wastewater is difficult, waste minimization and pretreatment is a more effective way to control discharges of mercury.

Through mercury minimization, LDEQ anticipates that mercury pollution prevention and waste minimization rather than end-of-pipe controls will result in the most efficient reduction of mercury discharges to surface waters of Louisiana from domestic wastewater treatment facilities. Pollution prevention and waste minimization of mercury are more reasonably accomplished and cost productive than the implementation of controls and technologies to meet end-of-pipe mercury effluent limitations.

Mercury minimization employs effluent sampling and system wide monitoring programs to locate and identify potential sources of mercury into the treatment system. Once identified mercury minimization integrates cost-effective reduction controls, either treatment or prevention based, to reduce or eliminate mercury from the source. Therefore, the permittee will be required to develop and implement a Mercury Minimization Program Plan (MMPP).

Timber Branch Model

On September 30, 2004, a model to address permit limits for dischargers into the Tchefuncte River was performed. The model included four facilities: Westwood Regional STP (0.7 MGD), Tallow Creek STP (0.11 MGD), Timber Branch II (0.5 MGD), and Hwy. 21 STP (0.15 MGD), all owned and operated by SELA. The results of the model show that under the areawide policy limits of 10 mg/l BOD₅ and 5 mg/l NH₃-N, the minimum DO level drops only 0.14 mg/l. In the opinion of the Water Quality Assessment Division of the Department, these limits would be acceptable pending development of the TMDL for Subsegment 040803. However, since the model was run, there has been some changes to the facilities. The Westwood Regional plant is permitted to discharge 0.5 MGD, instead of 0.7 MGD listed in the model. The Tallow Creek STP is permitted to discharge 0.15 MGD, which is greater than the 0.11 MGD allowed in the model. The Hwy. 21 STP has been taken off line; therefore is no longer discharging. The Timber Branch II STP was modeled with a flow capacity of 0.5 MGD; however, SELA desires to increase the capacity up to 0.70 MGD. The Water Permits Division believes we can allow the discharge based on the model because, although the flow from each facility has changed, the net flow from the facilities has decreased. The model allows for 1.46 MGD of wastewater to be discharged. The actual discharge will only be 1.35 MGD. Also, the Tallow Creek STP will eventually be taken off-line and incorporated into the Timber Branch II STP.

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Interim Effluent Limits:**Outfall 001 – Phase I**

Final limits shall become effective on the effective date of the permit and expire when the expected flow of the facility exceeds 0.3 MGD.

Effluent Characteristic	Monthly Avg. (lbs./day)	Monthly Avg.	Weekly Avg.	Basis
CBOD ₅	25	10 mg/l	15 mg/l	Limits are set in accordance with the Water Quality Management Plan / Areawide Policy for St. Tammany Parish.
TSS	38	15 mg/l	23 mg/l	Since there is no numeric water quality criterion for TSS, and in accordance with the current Water Quality Management Plan, the TSS effluent limitations shall be based on a case-by-case evaluation of the treatment technology being utilized at a facility. Therefore, a Technology Based Limit has been established through Best Professional Judgement for the type of treatment technology utilized at this facility.
NH ₃ -N	13	5 mg/l	10 mg/l	Limits are set in accordance with the Water Quality Management Plan / Areawide Policy for St. Tammany Parish.

Other Effluent Limitations:**1) Fecal Coliform**

The discharge from this facility is into a water body which has a designated use of Primary Contact Recreation. According to LAC 33:IX.1113.C.5.b.i, the fecal coliform standards for this water body are 200/100 ml and 400/100 ml. Therefore, the limits of 200/100 ml (Monthly Average) and 400/100 ml (Weekly Average) are proposed as Fecal Coliform limits in the permit. These limits are being proposed through Best Professional Judgement in order to ensure that the water body standards are not exceeded, and due to the fact that existing facilities have demonstrated an ability to comply with these limitations using present available technology.

2) pH

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time. (Limits as established through BPJ considering BCT for similar waste streams in accordance with LAC 33:IX.5905.C.).

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3) Solids and Foam

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

Final Effluent Limits:

OUTFALL 001 – Phase II

Final limits shall become effective when the expected flow of the facility exceeds 0.3 MGD and expire on the expiration date of the permit.

Effluent Characteristic	Monthly Avg. (lbs./day)	Monthly Avg.	Weekly Avg.	Basis
CBOD ₅	58	10 mg/l	15 mg/l	Limits are set in accordance with the Water Quality Management Plan / Areawide Policy for St. Tammany Parish.
TSS	88	15 mg/l	23 mg/l	Since there is no numeric water quality criterion for TSS, and in accordance with the current Water Quality Management Plan, the TSS effluent limitations shall be based on a case-by-case evaluation of the treatment technology being utilized at a facility. Therefore, a Technology Based Limit has been established through Best Professional Judgement for the type of treatment technology utilized at this facility.
NH ₃ -N	29	5 mg/l	10 mg/l	Limits are set in accordance with the Water Quality Management Plan / Areawide Policy for St. Tammany Parish.

Other Effluent Limitations:

1) Fecal Coliform

The discharge from this facility is into a water body which has a designated use of Primary Contact Recreation. According to LAC 33:IX.1113.C.5.b.i, the fecal coliform standards for this water body are 200/100 ml and 400/100 ml. Therefore, the limits of 200/100 ml (Monthly Average) and 400/100 ml (Weekly Average) are proposed as Fecal Coliform limits in the permit. These limits are being proposed through Best Professional Judgement in order to ensure that the water body standards are not exceeded, and due to the fact that existing facilities have demonstrated an ability to comply with these limitations using present available technology.

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2) pH

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time. (Limits as established through BPJ considering BCT for similar waste streams in accordance with LAC 33:IX.5905.C.).

3) Solids and Foam

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

X.

PREVIOUS PERMITS:

LPDES Permit No. LAG570184: Issued: June 6, 2000

Expired: September 30, 2002

This permit was terminated on December 7, 2004, at the request from the permittee because the facility was never constructed.

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Monthly Avg.</u>	<u>Weekly Avg.</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow	N/A	Report	1/month	Measure
BOD ₅	10 mg/l	15 mg/l	1/month	Grab
TSS	15 mg/l	23 mg/l	1/month	Grab
Fecal Coliform				
Colonies/100 ml	200	400	1/month	Grab
pH	Range (6.0 su – 9.0 su)		1/month	Grab

XI.

ENFORCEMENT AND SURVEILLANCE ACTIONS:

A) Inspections

No recent inspections have been performed for this facility.

B) Compliance and/or Administrative Orders

A review of the files indicates that no enforcement actions have been administered against this facility.

C) DMR Review

There are no recent DMRs on file for this facility because the previous permit was terminated in 2004 because the facility was never constructed.

XII.

ADDITIONAL INFORMATION:

Please be aware that the Department will be conducting a TMDL in the Lake Pontchartrain Basin scheduled for completion in 2011. The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions as a result of the TMDL. Therefore, prior to upgrading or expanding this facility, the permittee should contact the Department to determine the status of the work being done to establish future effluent limitations and additional permit conditions.

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Final effluent loadings (i.e. lbs/day) have been established based upon the permit limit concentrations and the design capacity of 0.68 MGD.

Effluent loadings are calculated using the following example:

$$\text{CBOD}_5: 8.34 \text{ lb/gal} \times 0.70 \text{ MGD} \times 10 \text{ mg/l} = 58 \text{ lb/day}$$

During Phase I, the Monitoring Requirements, Sample Types, and Frequency of Sampling as shown in the permit are standard for facilities of flows between 0.10 and 0.50 MGD.

<u>Effluent Characteristics</u>	<u>Monitoring Requirements</u>	
	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow	Continuous	Recorder
CBOD ₅	2/month	Grab
Total Suspended Solids	2/month	Grab
Ammonia-Nitrogen	2/month	Grab
Fecal Coliform Bacteria	2/month	Grab
pH	2/month	Grab

During Phase II, the Monitoring Requirements, Sample Types, and Frequency of Sampling as shown in the permit are standard for facilities of flows between 0.50 and 1.00 MGD.

<u>Effluent Characteristics</u>	<u>Monitoring Requirements</u>	
	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow	Continuous	Recorder
CBOD ₅	1/week	3 Hour Comp.
Total Suspended Solids	1/week	3 Hour Comp.
Ammonia-Nitrogen	1/week	3 Hour Comp.
Fecal Coliform Bacteria	1/week	Grab
pH	1/week	Grab

XIII TENTATIVE DETERMINATION:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to issue a permit for the discharge described in this Statement of Basis.

XIV REFERENCES:

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 8, "Wasteload Allocations / Total Maximum Daily Loads and Effluent Limitations Policy," Louisiana Department of Environmental Quality, 2005.

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 5, "Water Quality Inventory Section 305(b) Report," Louisiana Department of Environmental Quality, 1998.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Chapter 11 - "Louisiana Surface Water Quality Standards," Louisiana Department of Environmental Quality, 2004.

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Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Subpart 2 - "The LPDES Program," Louisiana Department of Environmental Quality, 2004.

Low-Flow Characteristics of Louisiana Streams, Water Resources Technical Report No. 22, United States Department of the Interior, Geological Survey, 1980.

Index to Surface Water Data in Louisiana, Water Resources Basic Records Report No. 17, United States Department of the Interior, Geological Survey, 1989.

LPDES Permit Application to Discharge Wastewater, Southeastern Louisiana Water & Sewer Company, LLC, Timber Branch II Sewage Treatment Plant, November 27, 2006, and June 8, 2007.